## Rec'd PET/PTO 12 MAY REPLACED BY ART 34 AMDT 10/534867

## **CLAIMS**

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- 1. A process for the separation of 1,4-butanediol mononitrate from a solution of 1,4-butanediol dinitrate and 1,4-butanediol in a water-immiscible organic solvent, comprising:
  - a) extraction of 1,4-butanediol mononitrate from said solution by water;
  - b) extraction of 1,4-butanediol mononitrate from the resulting aqueous solution, by a water-immiscible organic solvent.
- 2. A process as claimed in claim 1, characterized in that the extraction according to steps a) and b) is carried out in counter-current in two or more extraction columns.
  - 3. A process as claimed in claim 1, wherein the extraction according to steps a) and b) is carried out in counter-current in 2, 3 or 4 extraction columns.
- 4. A process as claimed in claim 3, wherein the extraction according to steps a) and b) is carried out in counter-current in 2 extraction columns.
  - 5. A process according to any one of claims 1 4 further comprising washing the aqueous phase from step a) with the same water-immiscible organic solvent as that used in the subsequent step b).
- 20 6. A process according to any one of claims 1 4, comprising the extraction of the resulting organic solution from step a) with the aqueous phase from step b) and the recycle of the aqueous solution to the extraction column of step a).
- 7. A process according to any one of claims 1 6, comprising 1 to 4 extraction cycles according to steps a) and b).
  - 8. A process according to any one of claims 1 7, wherein the water-immiscible organic solvent is an organic chlorinated solvent.
  - 9. A process as claimed in claim 8, wherein the chlorinated solvent is



selected from the group consisting of dichloromethane, trichloromethane, tetrachloromethane, trichloroethane and tetrachloroethane.

- A process as claimed in claim 9, wherein the chlorinated solvent is dichloromethane.
- 5 11. 1,4-Butanediol mononitrate with purity above 99%.